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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,378	09/15/2004	Chin-Chung Tu	13816-US-PA	5377

31561 7590 07/17/2006

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE
7 FLOOR-1, NO. 100
ROOSEVELT ROAD, SECTION 2
TAIPEI, 100
TAIWAN

EXAMINER

RAO, SHRINIVAS H

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 07/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/711,378

Applicant(s)

TU ET AL.

Examiner

Steven H. Rao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 10-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) 1-17 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Response to Amendment

Applicants' amendment filed on April 21, 2006 has been entered and forwarded to the examiner on May/03/2006.

Therefore claims 1, 3, 5, 6, as amended by the amendment and claims 2, 4, and 7-9 as originally filed are currently pending in the Application.

Claims 10-17 were withdrawn from consideration and must be cancelled. (see below).

Claims 18-19 were previously cancelled.

Election/Restrictions

This application contains claims 10-17 drawn to an invention nonelected with traverse in Paper filed on December 09, 2005.

A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Information Disclosure Statement

To date no IDS has been filed in the case.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trojan et al. (U.S. Patent No. 5,899,798, herein after Trojan) previously applied and in view of Boyd et al. (U.S. Patent No. 6,592,437, herein after Boyd).

With respect to claim 1 Trojan describes a mechanism for compressing chips, comprising : a loading component, (Trojan figure 7-Load cell) a head component disposed under the loading component (Trojan figures 4 A, 6 etc. # 401).

Trojan does not specifically describe the head component has a heating plane therein and a gap is existed between the loading component and the head component .

However, Boyd, a patent from the same filed of endeavor describes in col.10 lines 40-50 etc. describe the head component has a heating plane therein and a gap is existed between the loading component and the head component to make it easier to assemble the active gimbal with the carrier plate and the wafer support (col.4 lines 63-66) and vary the temperature of the wafer being processed to provide optimum temperature range for the further processing of the wafer e.g. assembling (i.e. bonding) , CMP etc.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include Boyd's describe the head component has a heating plane therein and a gap is existed between the loading component and the head component in Trojan's device . The motivation to make the above combination is to make it easier to assemble the active gimbal with the carrier plate and the wafer support (col.4 lines 63-66) and vary the temperature of the wafer being processed to provide optimum

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temperature range for the further processing of the wafer e.g. assembling (i.e. bonding), CMP etc.

The remaining limitations of claim 1 are :

a gimbal disposed between the loading component and the head component to support the gap there between. (Trojan figure 4A ,7 when gimbal integral with contact pint i.e. head component col.6 lines 35-37, Boyd figures, e tc.).

With respect to claim 2 Trojan describes the mechanism for compressing chips of claim 1, wherein the head component has a groove and the bottom of the loading component is partially inset into the groove. (Trojan figure 7).

With respect to claim 3 to the extent understood , Trojan describes the mechanism for compressing chips of claim 2, wherein the head component comprises: a first gasket having a contact point with the gimbal , and a ring piece fixed on the first gasket, (Trojan 600) wherein the ring piece has a hollow portion such that the groove is existed between the ring piece and the first gasket (Trojan figure 5 # 550 similar to applicants' figure 2 # 232, see also Trojan col.8 lines 56 to 65, col. 10 lines 16-24, also Boyd figures)

With respect to claim 4 Trojan describes the mechanism for compressing chips of claim 3, wherein the upper surface of the first gasket has a first notch, where the Gimbal is disposed. (Trojan figure 7, col. 10 lines 16-24).

With respect to claim 9 Trojan describes the mechanism for compressing chips of claim 1, wherein the bottom surface of the loading component has a second notch where the gimbal is disposed. (Trojan figures).

B. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trojan et al. (U.S. Patent No. 5,899,798 , herein after Trojan) and Boyd et al. U.S> Patent No. 6,592,437, herein after Boyd) as applied to claims 1-4, 9 etc. above and further in view of Luse et al. (U.S. Patent No. 6,486,660, herein after Luse).

With respect to claim 5 Trojan and Boyd describe the mechanism for compressing chips of claim 3, with the head component .

Trojan and Boyd do not specifically describe the head component further comprises a heating plate fixed under the bottom surface of the first gasket .

However Luse , a patent from the same filed of endeavor describes in figure 5 and col. 6 lines 7 to 20 a pair of heating plates fixed under the bottom surface of the first gasket to provide a thermoelectric source to melt the adhesive or heat the components when quicker bonding is desired.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include Luse's heating plates in Trojan and Boyd's device to provide a thermoelectric source to melt the adhesive or heat the components when quicker bonding is desired.

With respect to claim 6 to the extent understood, Trojan describes the mechanism for compressing chips of claim 5, wherein the head component further comprises a second gasket fixed under the heating plate first gasket and the second gasket. (Luse figure 5 # 502).

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which is placed between the With respect to claim 7 Trojan describes the mechanism for compressing chips of claim 6, wherein the head component further comprises at least one fixing piece joining the ring piece, the first gasket, the heating plate and the second gasket. (Luse figure 5 plate spring clamping mechanism, col. 5 lines 55- col. 6 line 6).

With respect to claim 8 Trojan describes the mechanism for compressing chips of claim 7, wherein the fixing piece comprises a screw. (Luse col. 5 lines 55- col. 6 line 6, Trojan col. 8 line 64).

Response to Arguments

Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

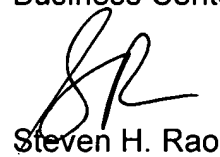
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven H. Rao whose telephone number is (571)272-1718. The examiner can normally be reached on 8.00 to 5.00.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Steven H. Rao

Patent Examiner

July 06, 2006.



LONG PHAM
PRIMARY EXAMINER